

STRIGOTSKIY, M., gvardii mayor; VOROTNIKOV, M., polkovnik

Drill-and-tactics exercises with tank units; from experience.
Voen.vest. 38 no.11:38-44 N '58. (MIRA 11:12)
(Tank warfare)

VOROTNIKOV, M.

VOROTNIKOV, M., polkovnik; SHUPLYAKOV, V., podpolkovnik.

Coordinated action of a rifle company with tanks during a night
offensive. Voen.vest. 37 no.10:36-43 O '57. (MIRA 10:12)
(Night fighting (Military science))
(Tanks (Military science))
(Infantry drill and tactics)

USSR/Human and Animal Physiology: Nerve and Muscle Physiology. T-9

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55952.

Author : Vorotnikov, M.V.

Inst : Mordovsk Institute of Pediatrics.

Title : The Problem of the Effect of Changes in the Inductive Current Direction Upon the Muscles Contraction during Direct Irritation.

Orig Pub: Uch. zap. Mordovsk. ped. in-t, 1956, vyp. 3, 173-203.

Abstract: The effect of the inductive current's direction upon the thresholds of direct irritation of frog muscles and upon the extent of muscular contractions (single ones) was studied. A stronger stimulating effect was noted upon the gastrochenius muscle by electric shocks caused by breaking (B) and closing (C) of circuits of weak generated currents (GC). When elec-

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USSR/Human and Animal Physiology. Nerve and Muscle Physiology. T-9

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55952.

trodes were placed in normal and curarized gastro-
chenius muscles upon the upper, middle, and lower
sections of the muscles, the diversity of stimula-
tions in relation to the inductive currents of oppo-
site direction remained unchanged, even though it
was expressed more strongly when the electrodes
were situated terminally. When the electrodes were
placed along the ends of the muscle (in contradis-
tinction to observations made when they were placed
at the upper third of the muscle, the sartorius
proved to be stimulated stronger by descending cur-
rent (DC). At curarization, when the electrodes
were placed in the same position, the stimulation of
the muscle was reversed. The cause of greater excit-

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143

USSR/Human and Animal Physiology. Nerve and Muscle Physiology. T-9

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55952.

ability of the normal gastrochenius muscle, as well as of the sartorius muscle by ascending current may be found, according to Vvedenskiy, in the close proximity of the stimulating source (cathode) to the entrance site of the motor nerve and to the closer placement of the terminal laminae. In the majority of the threshold determinations of the gastrochenius and sartorius muscle tetanuses (in the latter when the electrodes were placed at the upper third of the muscle), the thresholds of ascending current (AC) are lower than in DC. When the electrodes were placed along the terminal ends of the muscles, the thresholds of tetanic contractions were lower at AC than at DC. In both cases, however,

Card : 3/4

PONOMARENKO V.

VOLKOV, V.V.; VOROTHIKOV, P.Ye.; KOLTIPIH, Ye.A.; SIDOROV, N.I.; YAN'KOV, G.B.

Study of the D-D reaction in the 0,20 to 1,75 Mev deuteron energy
range. Atom energ. suppl. no.5f15-25 '57. (MIRA 11:2)
(Nuclear reactions)

L 1122-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c)

ACCESSION NR: AP5016376

UR/0120/65/000/003/0027/0033

621.384.65

34
B

11.65

AUTHOR: Vorotnikov, P. Ye.TITLE: Producing short pulses of ion current in an electrostatic acceleratorSOURCE: *Pribory i tekhnika eksperimenta*, no. 3, 1965, 27-33

TOPIC TAGS: electrostatic accelerator

ABSTRACT: Connected with R. J. Connor's work (*Nucl. Instr. and Meth.*, 1961, 11, 122), a calculation of phase focusing of ions in an electrostatic accelerator is presented. It is shown that by using conventional low-power ion sources and by treating the emerging ions with a longitudinal a-c electric field (an additional bunching electrode in the ion-optical system), 3×10^{-9} -sec H⁺ and D⁺ current pulses as high as 1.5 ma can be produced at the accelerator output; energy inhomogeneity, 0.0002. The presence of a d-c component in the ion current is regarded as a shortcoming of the method; this component can be eliminated by

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L 1122-66

ACCESSION NR: AP5016376

H. W. Lewis' et al. method (Rev. Sc. Instr., 1959, 30, 923). A sketch of the possible phase-focusing pulsed ion source is shown. Orig. art. has: 6 figures and 32 formulas.

ASSOCIATION: Institut atomnoy energii GKAE (Institute of Atomic Energy
GKAE)

SUBMITTED: 19Mar64

ENCL: 00

SUB CODE: NP, EC

NO REF SOV: 003

OTHER: 009

Card 2/2

ACC NR: AP6034218

(A,N)

SOURCE CODE: IJR/0120/66/000/005/0037/0039

AUTHOR: Vorotnikov, P. Ye.; Zubov, Yu. G.; Molchanov, Yu. D.; Udod, A. A.;
Yan'kov, G. B.

ORG: Institute of Atomic Energy, GKAE, Moscow (Institut atomnoy energii GKAE)

TITLE: A nanosecond-pulse ion source

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1966, 37-39

TOPIC TAGS: ion source, particle acceleration, ion accelerator, NANOSECOND
PULSE, ELECTROSTATIC GENERATORABSTRACT: Test results of a pulse ion source for an electrostatic accelerator are presented. The testing apparatus was constructed on the basis of P. Ye. Vorotnikov calculations (see Fig. 1). Using a relatively low-power high-frequency source ($I^2 = 60 \mu\text{A}$) and applying phase ion focusing, a very economical source of ion current pulses of approximately 2 nsec duration, a pulse current of ~1.5 ma, and a repetition rate of approximately 4 Mc can be obtained. The ion energy spread was found to constitute 400 ev, and the ion current utilization factor was about 25%. The authors thank V. G. Brovchenko who helped in developing the measuring procedure. Orig. art. has: 5 figures and 2 formulas.

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UDC: 621.384.62

ACC NR: AP6034218

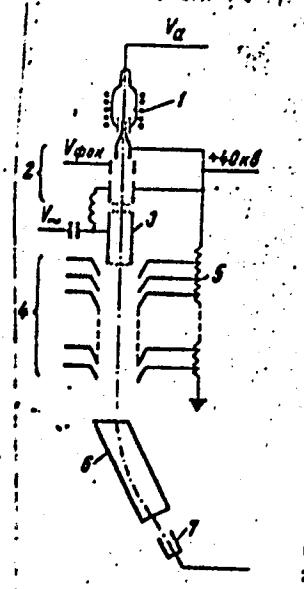


Fig. 1. Schematic diagram of the pulsed ion source

- 1 - High-frequency ion source;
- 2 - bunching electrode;
- 3 - accelerating tube consisting of 16 conical electrodes;
- 5 - voltage divider;
- 6 - magnetic separator;
- 7 - ion collector.

SUB CODE: 20/ SUBM DATE: 14Oct65/ ORIG REF: 002/ OTH REF: 001/
Card 2/2

"APPROVED FOR RELEASE: 03/14/2001

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CIA-RDP86-00513R001861010020-2"

VOROTNIKOVA, V.; D'YACHENKO, V.

Production qualifications of assembly workers in machinery
manufacturing. Sots. trud 6 no.6:50-55 Je '61.

(MIRA 16:8)

KOZHEVNIKOV, A.N.; LAZEBNIKOV, Yu.S., dots.; MIROSHNIK, B.Ye.,
dots.; SHADRIN, N.A., prof.; Prinimali uchastiye:
SUBBOTIN, B.K., st. prepod.; VOROTNIKOV, V.I., dots.;
ANPILOGOV, R.G., retsenzent; ALEKSEYEV, V.B., retsenzent;
LYUBOMUDROV, A.P., retsenzent; CHERNOV, P.N., retsenzent;
PESKOVA, L.N., red.; BOBROVA, Ye.N., tekhn. red.;

[Economics of railroad engineering] Ekonomika zheleznodorozh-
nogo stroitel'stva. [By] A.N. Kozhevnikov i dr. Moskva,
Transzheldorizdat, 1963. 242 p.
(MIRA 17:1)

VOROTNIKOV, Yu. A.: Master TechSci (diss) -- "A study of the possibility of using pressed fluid for preparing a concentrate of vitamin B-12". Kaliningrad, 1959. 15 pp (Min Higher Educ USSR, Kaliningrad Tech Inst of the Fish Industry and Economy), 150 copies (KL, No 18, 1959, 124)

VOROTNIKOV, Yu.A.

Using presswater in the production of vitamin B₁₂ concentrate.
Izv.vys.ucheb.zav.pishch.tekh. no.4:83-89 '58. (MIRA 11:11)

1. Moskovskiy tekhnicheskiy institut rybnoy promyshlennosti i
khozyaystva imeni A.I. Mikoyana, Kafedra tekhnologii rybnykh
produktov.

(Vitamins--B) (Fishery products) (Proprioni bacterium)

VOROTNIKOV, Yu.A.

Chemical composition of press effluent. Izv. vys. ucheb. zav.:
pishch. tekhn. no.3:73-77 '58.
(MIRA 11:9)

1. Moskovskiy tekhnicheskiy institut rybnoy promyshlennosti i
khozyaystva imeni A.I. Mikoyana, Kafedra tekhnologii rybnikh
produktov.

(Fishery products)

VOROTNIKOVA, A. I., CAND MED SCI, "CLINICAL CHARACTERISTICS
OF PNEUMOCONIOSIS IN WORKERS ENGAGED IN THE PRODUCTION OF TIN."
Moscow, 1961. (INST OF ~~INDUSTRIAL~~ ^{LABOR} HYGIENE AND OCCUPATIONAL DI-
SEASES OF ACAD MED SCI USSR). (KL-DV, 11-61, 227).

-243-

VOROTNIKOVA, A. I., KHLERNIKOVA, N. I.

"Hygienic significance of the dust factor in the production of tin,"
report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

VOROTNIKOVA, A.K.; ABIYEVA, S.A.

Case of multiple intracranial calcifications in a child
after tuberculous meningitis. Azerb. med. zhur. 41 no.9:
79-82 S '64.
(MIRA 18:11)

1. Iz detskoy klinicheskoy bol'nitsy imeni Narimanova (glavnnyy
vrach - K.I. Efendiyeva). Submitted July 2, 1963.

SIROTA, A.D.; VOROTNIKOVA, A.M.

Course of alveolar echinococcosis of the liver. Vrach.delo
no.4:142-143 Ap'63. (MTRA 16:7)
(LIVER—HYDATIDS)

KOCHETKOV, N.K.; KHLORLIN, A.Ya.; VOROTNIKOVA, L.A.

Amines with gangliolytic activity. Part 3: Secondary
diamines with a branched chain. Zhur.ob.khim. 30 no.7:
2303-2305 J1 '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut farmakologii i
khimioterapii Akademii meditsinskikh nauk SSSR.
(Amines)

V. V. NIKONOV, L.A.

USSR/Organic Chemistry - Synthetic Organic Chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4405

Author : Kochetkov, N.K., Vorotnikova, L.A.

Title : On Synthesis of Phthalazines by Cyclization of Acylhydrazones of Aromatic Aldehydes

Orig Pub : Zh. obshch. khimii, 1956, 26, No 4, 1143-1145

Abstract : Treatment of acylhydrazones of aromatic aldehydes with HCl gas in iso-C₅H₁₁CH (1 hour at ~ 100° and 1 hour boiling) gives not derivatives of phthalazine (PA) as was formerly believed (Agarwal J. et al., J. Chem. Soc., 1929, 1941; 1930, 2354) but the azines (A) of the corresponding aldehydes. This is demonstrated in the case of acetyl- and benzoyl hydrazone of veratric aldehyde (I and II) and benzoyl hydrazone of anisaldehyde. The very close melting point values of PA and the corresponding A have contributed to the previous erroneous conclusions. Formation of A and not of PA in the

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- 64 -

AUTHORS: Kochetkov, N. K., Vorotnikova, L. A. SOV/79-29-2-38/71

TITLE: Some Derivatives of 1,2,3-Triaminopropane (Nekotoryye proizvodnyye 1,2,3-triaminopropana)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 532-535 (USSR)

ABSTRACT: From among aliphatic-aromatic amines many are known which develop a strong and versatile physiological activity, e.g. the derivatives of N-substituted ethylene diamine of type (I). It was of some interest for the authors to synthesize the 1,2,3-triaminopropane derivatives of type (II), which so far have been unknown, and to investigate their physiological effect. Recently Morren, H. and Denayer, R. (Ref 1) reported on the high spasmodolytic activity of some derivatives of this type.

$$\begin{array}{c} \text{R}_1 \\ | \\ \text{N}-\text{CH}_2-\text{CH}_2-\text{N} \\ | \quad \backslash \\ \text{R}_2 \quad \text{R}_4 \\ (\text{I}) \end{array} \qquad \begin{array}{c} \text{RRNCH}_2-\text{CH}-\text{CH}_2\text{NRR} \\ | \\ \text{NR}_1\text{R}_2 \\ (\text{II}) \end{array}$$

in (I) R_1 and R_2 are aromatic and aliphatic-aromatic radicals; R_3 and $\text{R}_4 = \text{CH}_3, \text{C}_2\text{H}_5$ etc; in (II) $\text{R}_1 = \text{Ar}$; $\text{R}_2 = \text{ArCH}_2$. According to the scheme mentioned, the authors synthesized compounds of

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Some Derivatives of 1,2,3-Triaminopropane

SOV/79-29-2-38/71

the 1,2,3-triaminopropane series which have aryl and aralkyl radicals at the central nitrogen atom. The α - γ -dichlorohydrine of glycerin (III) was condensed with the secondary amine (dimethyl amine, diethyl amine, piperidine, morpholine and hexamethylene imine). After treatment with thionyl chloride the amino alcohols (IV) obtained passed into the amino chlorides (V). The last stage of reaction comprised the condensation of (V) with secondary amines of the type benzyl aniline in toluene and the addition of sodium amide on heating. The separation of (II) was complicated (by-processes). Through distillation of the reaction products in vacuum it was possible to obtain compound (II) in pure state (yield 25%). Due to their hygroscopic nature, the chlorine hydrates (II) could not be obtained in crystalline state (which holds also for sulfates and oxalates for the same reason). For the purpose of characterizing the products (II) obtained the authors synthesized their iodine methylates; in this process only monoiodine methylates in pure state resulted in all cases. All preparations produced exhibit a very weak spasmolytic activity. There are 3 tables and 1 reference.

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SOV/79-29-2-38/71

Some Derivatives of 1,2,3-Triaminopropane

ASSOCIATION: Institut farmakologii i khimioterapii Akademii meditsinskikh nauk SSSR (Institute of Pharmacology and Chemotherapy of the Academy of Medical Sciences, USSR)

SUBMITTED: December 17, 1957

Card 3/3

KHORLIN, A.Ya.; VOROTNIKOVA, L.A.; KOCHETKOV, N.K.

Amines with gangliolytic activity. Part 4: Tertiary aliphatic amines with a branched chain. Zhur. ob. khim. 31 no.6:1827-1830 Je '61. (MIRA 14:6)

1. Institut farmakologii i khimioterapii Akademii meditsinskikh nauk SSSR.

(Amines)

LEONT'YEV, A.N.; VOROTNIKOVA, L.M.

Determination of the age of the long-tailed suslik (*Citellus*
undulatus Pall). Izv. Irk.gos.mauch.-issl.protivochum.inst.
16:60-68 '57. (MIRA 13:7)
(SUSLIKS)

VOROTNIKOVA, M.I.; SGLUKHIN, R.I.

Calculating the pulsations of gas bubbles in an incompressible liquid under periodically varying pressure. Akust. zhur. 10 no.1:34-39 '64. (MIRA 17:5)

1. Institut gidrodinamiki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

S/207/62/000/002/011/015
D237/D302

AUTHOR: Vorotnikova, M. I. (Novosibirsk)

TITLE: Influence of the rate of thermal emission during electrical underwater discharge, on its energy distribution

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki,
no. 2, 1962, 110-112

TEXT: During the electrical discharge under water, it can be assumed that the energy distribution is divided basically into the energy carried away with the shock wave and the energy of the radial motion of the layers of the medium, adjacent to the gas bubble. In the present work, the energy distribution in an electrical underwater discharge between the two modes of motion shown above, was investigated in relation to the initial velocity of energy emission. The apparatus is described. Time and current-voltage relationship across the spark gap were recorded on an OK-25 (OK-25) oscillo-

Card 1/2

Influence of the rate ...

S/207/62/000/032/011/015
D237/D302

graph; pressure wave from the spark was recorded on the oscillograph EO-581 (EO-58M); first oscillation of the gaseous bubble was photographed by synchro-flash. The data obtained are interpreted and illustrated graphically. It was found that the energy of the radial motion represented about 22% of the energy initially stored in the condensers and did not depend on the initial velocity of energy emission. The author thanks R. I. Soloukhin for the interest shown. There are 7 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: August 25, 1961

Card 2/2

VOROTNIKOVA, M.I. (Novosibirsk); KEDRINSKIY, V.K. (Novosibirsk); SOLOUKHIN,
R.I. (Novosibirsk)

Shock tube for studying one-dimensional waves in fluids.
Nauch.-tekhn. probl. gor. i vzryva no.1:5-14 '65.

(MIRA 18:9)

"APPROVED FOR RELEASE: 03/14/2001

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CIA-RDP86-00513R001861010020-2

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

FUL'VER, Yevgeniy Aleksandrovich; VOROTNIKOVA, R.V., red.

[Get acquainted with Voronezh; a reference guidebook]
Znakom'ts's Voronezhem; putevoditel'-spravochnik. Vo-
ronezh, Tsentral'no-Chernozemnoe knizhnoe izd-vo, 1965.
269 p. (MIRA 18:11)

BELYAK, Konstantin Nikitovich; VOROTNIKOVA, R.V., red.

[Central Chernozem Economic Region] Tsentral'no-
Chernozemnyi ekonomicheskii. Voronezh, Tsentral'no-
Chernozemnoe knizhnoe izd-vo, 1965. 149 p.

(MIRA 18:11)

1. Predsedatel' sovmarkhoza Tsentral'no-Chernozemnogo
ekonomicheskogo rayona (for Belyak).

TRUBILIN, Ivan Afanas'yevich; VOROTNIKOVA, R.V., red.

[Shift plan for increasing labor productivity]

Smennyi plan povysheniia proizvoditel'nosti truda.
Voronezh, Tsentral'no-chernozemnoe knizhnoe izd-vo,
1964. 23 p. (MIRA 18:1)

1. Master smeny kommunisticheskogo truda imeni XXII
s"yezda Kommunisticheskoy partii Sovetskogo Soyuza
zavoda "Voronezhskl'mash" (for Trubilin).

SKOPIN, Ivan Dmitriyevich; VOROTNIKOVA, R.V., red.

[Always searching] Vsegda v poiske. Voronezh, Voronezhskoe knizhnoe izd-vo, 1963. 43 p. (MIRA 18:1)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2

SIL'CHENKO, Serafim Semonovich; VOROTNIKOVA, R.V., red.

[How best to save metal] Kak luchshe ekonomit' metall.
Voronezh, Voronezhskoe knizhnoe izd-vo, 1963. 42 p.
(MIRA 18:1)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

STEPANOV, Georgiy Fedorovich; VOROTNIKOVA, R.V., red.

[For business executive on the principle of material incentives] Khoziaistvenniki o printsipe material'noi zainteresovannosti. Voronezh, Voronezhskoe knizhnoe izd-vo, 1963. 40 p. (MIRA 18:1)

PUSTOVALOV, Vasiliy Georgiyevich; VORONIKOVA, R.V., red.

[Technology of the compression of wood and its application;
from the work practices of the Kalinin Voronezh Plant] Tekhnologiya pressovaniia drevesiny i ee primenenie; iz opyta raboty Voronezhskogo zavoda im. Kalinina. Voronezh, Voronezhskoe knizhnoe izd-vo, 1961. 54 p. (I.IRA 17:10)

BEVZ, Nikolay Sidorovich; PERFIL'YEV, Andrey Il'ich; CHERNYSHOVA,
Yelena Vladimirovna [deceased]; CHISTOKLETOV, Grigoriy
Fedorovich; VOROTNIKOVA, R.V., red.

[Geography of Voronezh Province; textbook for grade 8]
Geografiia Voronezhskoi oblasti; uchebnoe posobie dlia
8-kh klassov. Izd.2., ispr. i dop. Voronezh, TSentral'no-
chernozemnoe knizhnoe izd-vo, 1965. 81 p. (MIRA 19:1)

VOROTNIKOVA, V.; ZHAROV, P.

Photography of the workday of auxiliary workers using the method of
intermittent observations. Biul.nauch. inform.: trud i zar. plata
5 no.1:22-25 '62. (MIRA 15:2)
(Lugansk Province--Time study)

VOROTNIKOVA, V.; ZHAROV, P.

What do the results of the study show. Sots. trud 7 no.9:
117-122 S '62. (MIRA 15:9)

1. Nauchno-issledovatel'skiy institut truda.
(Warehouses)

VOROTNIKOVA, V.; D'YACHENKO, V.

Problems of labor organization in assembly processes of machinery manufacturing. Sots. trud 5 no.6:58-64 Je '60. (MIRA 13:11)
(Machinery industry) (Assembly-line methods)

KOVAL'SKIY, V.V.; VOROTNITSKAYA, I.Ye.

Biogenic migration of uranium in Issyk-Kul'. Geokhimiia no.6;724-
732 Je '65. (MIRA 18:7)

1. Vernadsky Institute of Geochemistry and Analytical Chemistry,
Academy of Sciences, U.S.S.R., Moscow.

NEMODRUK, A.A.; VOROTNITSKAYA, I.Ye.

Extraction-luminescence method for the determination of uranium
in soils, silt, plants, and animal tissues. Zhur.anal.khim.
17 no.4:481-485 J1 '62. (MIRA 15:8)

1. V.I.Vernadsky Institute of Geochemistry and Analytical
Chemistry, U.S.S.R., Academy of Sciences, Moscow.
(Uranium--Analysis) (Luminescence)

KOVAL'SKY, V.V., prof.; VOROTNITSKAYA, I.Ye.

Uranium in the silt of Lake Issyk'kul'. Priroda 54 no.2:79-85
Ag '65. (MIRA 18:8)

1. Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR, Moskva.

SEMISHIN, V.I.; AERAMOV, I.I.; VOROTNITSKAYA, L.T.

Investigating the solubility of magnesium sulfite. Izv.vys.
ucheb.zav.; khim.i khim.tekh. 2 no.6:834-839 '59. (MIRA 13:4)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.
Kafedra obshchey i organicheskoy khimii.
(Magnesium sulfite)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2

VOROTNITSKIY, M. K.

Machinery for mining and loading salt Moskva, Pishchepromizdat, 1945. 195 p. (49-30451)

TN900.V67

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

SEMISHIN, V.I.; VOROTNITSKAYA, L.T.

Peroxide compounds of copper. Izv. vys. ucheb. zav.; khim. i khim.
tekhn. 7 no.4:551-554 '64. (MIRA 17:12)

1. Kafedra obshchey i organicheskoy khimii Moskovskogo instituta
khimicheskogo mashinostroyeniya.

VOROTNITSKAYA, N.Ye.; POLYANOVSKIY, O.L.

Properties of aspartic-glutamic transaminase from the sternal muscle
of a pigeon. Dokl. AN SSSR 163 no.1:246-249 J1 '65. (MIRA 18:7)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR.
Submitted September 22, 1964.

ZELENIN, A.V.; BIRYUZOVA, V.I.; VOROTNITSKAYA, N.Ye.; LYAPUNOVA, Ye.A.

Separation of a subcellular fraction enriched with acridine orange
cytoplasmic granules. Dokl. AN SSSR 162 no.4:925-927 Je '65.

(MIRA 18:5)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN
SSSR. Submitted July 25, 1964.

VOROTNITSKAYA, N.Ye.; MOKHOVA, Ye.N.

Study of the cytochrome system in *Torula utilis* based on
the distribution of reduction degrees of chain links in a
steady state. Mikrobiologiya 34 no.3:418-423 My-Je '65.
(MIRA 18:11)

I. Institut radiatsionnoy i fiziko-khimicheskoy biologii
AN SSSR.

VOROTNITSKAYA, N.Ye.; ZELENIN, A.V.; LYAPUNOVA, Ye.A.; MEYSEL', M.N.

Luminescent microscopic study of normal and tumoral cells
fluorochromated with acridine orange at different pH values.
Dokl. AN SSSR 152 no.3:724-726 S '63. (MIRA 16:12)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR.
2. Chlen-korrespondent AN SSSR (for Meysel').

FOR YANOVSKIY, G.I.; VORONITSKAYA, N. Ye.

Comparative study of two aspartate-transaminases of different
origin by the method of peptide maps. Biokhimia 30 no. 3:
619-627 May-Je '65 (MIRA 19:1)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii
AN SSSR, Moskva.

VOROTNOY, N.F., brigadir; ZOLOTAREV, A.I., slesar'

Automatic device for forcing-out the air from mechanical
feed-water filters. Energetik 8 no.9:11 S '60. (MIRA 14:9)
(Feed water purification)

UDOVICHENKO, Anatoliy Matveyevich; VOROTSKAYA, Z.A., otv. red.;
SVERDLOVA, I.S., red.; MARKOVH, K.G., tekhn. red.

[Principles of radio communication and wire broadcasting
techniques] Osnovy tekhniki provodnoi i radiosviazzi. Moskva,
Sviaz'izdat, 1962. 366 p. (MIRA 16:2)
(Wire broadcasting) (Radio)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2

KAZUSHCHIK, V.A.; VOROTYNNSKIY, V.V.

Construction of cycles in a "Minsk-1" electronic computer. Vestsi
AN BSSR. Ser. fiz.-tekhn. nav. no.2:20-25 '64.

(MIRA 18:1)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

VOROTYNTSEV, A.

Problem of postoperative foreign bodies in the abdominal cavity.
Akush. gin. no.5:85-86 Sept-Oct 1953. (CLML 25:4)

1. Of the Department of Forensic Medicine (Head -- Prof. A. V. Rusakov),
Moscow Medical Institute of the Ministry of Public Health RSFSR.

BARYSHNIKOV, K.I.; BRISKIN, A.I.; VOROTYNTSEV, A.P.; GONCHAROV, P.I.;
DHUGOV, Yu.V.; LIPSHITS, L.A.; MOKELEV, N.I.; NAZAROV, A.V.;
PETROV, L.P.; SERDYUK, D.S.; SMETANKIN, K.P.; CHERNYAVSKIY, A.A.;
ARTEM'IEV, S.G., red.; ZAKHAROVA, A.I., tekhn.red.

[Sanitary and chemical protection; pathology, clinical aspects,
and treatment of poisoning. Manual for students and physicians]
Sanitarno-khimicheskaya zashchita; patologiya, klinika i terapiya
porazhenii otravleniushchimi veshchestvami. Rukovodstvo dlja stu-
dentov i vrachej. Moskva, Gos.izd-vo med.lit-ry, 1959. 434 p.

(MIRA 13:6)

(CHEMICAL WARFARE--SAFETY MEASURES)

VOROTYNTSEV, B.I.

Essential operating characteristics of separate inverters.
Izv. AN Uz. SSR. Ser. tekhn. nauk no.5:17-29 '58. (MIRA 11:12)
(Electric current converters)

L-10602-66

EWT(1)/EWA(h)

ACC NR: AR5023534

SOURCE CODE: UR/0275/65/000/008/V027/V028

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 8V204

AUTHOR: Vorotyntsev, B. N.

TITLE: Calculation of an independent inverter with switching capacitors operating on fundamental and higher harmonics

CITED SOURCE: Sb. dokl. Tashkentsk. politekhn. in-t, No. 6, 1964, 196-222

TOPIC TAGS: inverter, dc ac inverter, rotary inverter

TRANSLATION: A 6-phase independent inverter having switching capacitors operating from the fundamental and 3rd harmonics is analyzed. The 3rd harmonic operation is achieved by connecting the capacitor to the open-delta inverter-transformer tertiary winding or by connecting the capacitor to the secondary winding of an equalizing transformer. The inverter output voltages are assumed to be sinusoidal. This permits using the method of fundamental harmonic. The close-regulation external characteristics and possible working frequency band are analyzed by means of formulas derived in the article; also, the adjustment of operating conditions by varying (a) the capacitance of the switching capacitors, (b) the inverter-transformer ratio, or (c) the load parameters is considered. Bib 4.

SUB CODE: 09

Card 1/1

UDC: 621.314.57

VOROTYNTSEV, B.N.

Independent converter with a three-frequency capacitor. Izv.AN
Uz.SSR.Ser.tekh.nauk no.1:23-37 '59. (MIRA 12:5)

1. Institut energetiki i avtomatiki AN UzSSR.
(Phase converters)

8(5)

SOV/112-59-5-9014

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5, p 84 (USSR)

AUTHOR: Vorotynsev, B. N.

TITLE: Independent Inverter With Series Capacitors

PERIODICAL: Izv. AN Uz SSR. Ser. tekhn. n., 1958, Nr 1, pp 5-22
(Summary in Uzbek)

ABSTRACT: Autonomous inverters were developed for controlling the speed of an induction motor by means of adjustable frequency; they have a rectifier-inverter-motor scheme with parallel capacitors connected to the transformer primary or secondary; they have a drooping external characteristic and insufficient commutation stability at light loads. The commutation stability can be considerably improved by connecting commutating and compensating capacitors in series with the load. Results of an investigation of such an inverter operating in a 6-phase zero scheme are presented. External characteristics of an inverter supplying a 12-kw, 380-v, 930-rpm squirrel-

Card 1/2

SOV/112-59-5-9014

Independent Inverter With Series Capacitors

cage motor at various capacitor sizes (50, 70, 90, 120, and 150 μ F) are presented. Current and voltage oscillograms corresponding to one set of operating conditions of an inverter with series and series-parallel capacitors are presented.

G.S.P.

Card 2/2

VOROTYNTSEV, B.N.

Self-contained inverters with series capacitances. Izv. AN Uz. SSR.
Ser.tekh.nauk no.1:5-22 '58. (MIRA 11:6)

1.Institut energetiki i avtomatiki AN UzSSR.
(Electric current converters)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2

MELODIYEV, L.S.; VOROTYNTSEV, B.N.

Natural characteristics of an inverter with external switching
of e.m.f. Trudy Inst.energ.AN Uz.SSR no.10:55-65 '57. (MIRA 10:11)
(Electric current converters)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

MELODIYEV, L.S.; VOROTYNSEV, B.N.

Determining operating conditions of autonomous inverters. Izv. AN
Uz. SSR. Ser. tekhn. nauk no. 2:21-33 '57. (MIRA 11:?)
(Electric current converters)

9(4)

SOV/112-58-3-4753

Translation from: Referativnyy zhurnal. Elektrotehnika, 1958, Nr 3, p 198 (USSR)

AUTHOR: Melodiyev, L. S., and Vorotynsev, B. N.

TITLE: Natural Characteristics of an Inverter With External Controlling EMFs
(Yestestvennyye kharakteristiki invertora s vneshnimi kommutiruyushchimi
e. d. s.)

PERIODICAL: Tr. In-ta energ. AN Uzbekskaya SSR, 1957, Nr 10, pp 55-65

ABSTRACT: One of the principal requirements of a motor-supply-type inverter is that its output-voltage waveshape be as close as possible to the sine wave; this also determines the sine waveshape of the voltage across the firing-point controlling capacitors. This can simplify calculations of electromagnetic phenomena, because the control capacitors can be replaced by external EMFs obeying the sine law. Thus, the design of such a scheme would be similar to a design of an inverter supplying a counter-EMF load. Functioning of a parallel-inverter circuit with external controlling EMFs applied in parallel

Card 1/2

9(4)

SOV/112-58-3-4753

Natural Characteristics of an Inverter With External Controlling EMFs

with the primary windings of the inverter transformer is analyzed. One and two valves conduct in sequence. In this scheme, it is assumed that the inverter supplies a complex load and has a sufficient inductance in the cathode circuit. Relationships are developed which tie the inverter operating parameters with its load. On the basis of the data obtained, characteristics are constructed that express mutual relations among the following: firing-point angle, constant EMF, B-factor that characterizes the inverter load, and D-factor that characterizes the phase-control reactive power or the required capacitance of the phase-control capacitors. External characteristics of the inverter are also supplied. A conclusion is offered that the above relations represent the actual processes in an inverter scheme with sufficient accuracy and that they can be used for engineering designs of inverter operation.

I.L.R.

Card 2/2

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2

VOROTYNTSEV, D., polkovnik; BABKIN, G., podpolkovnik

Specialists of the rear complete. Tyl i snab. Sov. Vcor. Sil
21 no.10:43-46 0 '61. (MIRA 15:1)
(Russia--Army--Supplies and stores)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

SHAPOVAL, N.A., inzh.; VOROTYNTSEV, I.D., inzh.

Roof control by complete caving on "OKU" posts in machine-worked
longwalls in steep seams. Ugol' Ukr. 7 no.11:44 N '63.
(MIRA 17:4)

BERG, P.P.; VOROTYNTSEV, M.F.; GENKIN, N.M.; PAVLOV, Yu.N.; PRIPOROVA, G.B

Increasing the wear resistance of heavy duty dies. Lit. proizv.
no.1:39-40 Ja '65. (MIRA 18:3)

VOROTYNTSEV, Y.T., prof.

Tasks of the railroad management in accelerating the circulation
of cars. Sbor. trud. Akad. zhel. transp. no.1:122-134 '52.
(MIRA 11:3)

1. Zavedyushchiy kafedroy "Zheleznyye dorogi i ikh tekhnicheskoye
osnashcheniye" Akademii zheleznodorozhnogo transporta Ministerstva
putey soobshcheniya.

(Railroads--Management)

KAZARNOVSKIY, Ye.M., kand. tekhn. nauk; VOROTYNTSEV, P.P., inzh.

Improvement of the coal grinding operation of a redesigned
high-speed hammer mill with air flow separators.
Energomashinostroenie 9 no.3:30-33 Mr'63. (MIRA 17:5)

KAZARNOVSKIY, Ye.M., kand. tekhn. nauk; BURGVITS, G.A., inzh.; DIANOV, I.M.,
inzh.; VOROTYNTSEV, P.P.

Results of the study of the performance of hammer mills with air
blast separators in coal crushing operation. Energomashinostroenie
10 no.11:39-43 N '64 (MIRA 18:2)

VOROTYNTSEV, V.T.; ROZHDESTVENSKIY, P.V., otvetstvennyy red.; SLAVOROSOV,
A.Kh., red. izd-va; KOROVENKOVA, Z.A., tekhn. red.

[Drilling in unstable coal seams]. Burenie slaboustoichivykh ugol'-
nykh plastov. Moskva, Ugletekhnizdat, 1958. 68 p. (MIRA 11:9)
(Boring) (Coal geology)

VOROTYNTSEV, V.T.

MAKSIMOV, Vasiliy Mikhaylovich, dotsent, kand.geologo-miner.nauk; ASATUR, K.G., dotsent, kand.tekhn.nauk; DAVIDOVICH, V.I., dotsent, kand.tekhn.nauk; ALBUL, S.P., kand.geologo-miner.nauk; PAUKER, N.G., inzh.-gidrogeolog; OSTRUMOV, B.P., gidrotekhnik; ZAYTSEV, I.K., doktor geologo-miner.nauk; TOLSTIKHIN, N.I., prof., doktor geologo-mineral.nauk; REZNIKOV, A.A., kand.khim.nauk, starshiy nauchnyy sotrudnik; MERSHALOV, A.F., assistant; VOROTYNTSEV, V.T., dotsent, kand.tekhn.nauk; MARKOV, I.A., dotsent, kand.geologo-miner.nauk; KERKIS, Ye.Ye., dotsent, kand.geologo-miner.nauk; KHITROV, I.N., inzh.-geolog; BOROVITSKIY, V.P., kand.geologo-miner.nauk; RAVDONIKAS, O.V., kand.geologo-miner.nauk; ONIN, N.M., kand.geologo-miner.nauk; BASKOV, Ye.A., inzh.-gidrogeolog; NOVOZHILOV, V.N., dotsent, kand.geologo-miner.nauk; PEKEL'NYY, I.S., inzh.-gidrogeolog; NEVEL'SHTEYN, Yu.G., inzh.-gidrogeolog; BOSKIS, S.G., inzh.-gidrotekhnik; NIKIFOROV, Ye.M., inzh.-gidrogeolog; GATAL'SKIY, M.A., prof., doktor geologo-miner.nauk, nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; GEN-NAD'YEVA, I.M., tekhn.red.

[Hydrologist's handbook] Spravochnoe rukovodstvo gidrogeologa.
Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry,
Leningr. otd-nie, 1959. 836 p. (MIRA 12:4)

1. Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut
(for Reznikov).

(Hydrology)

VOROTYNTSEV, V.T.

Machine for making steel shot in the field. Razved.i okh.
nedr 21 no.1:60 Ja-F '55. (MLRA 9:12)

(Prospecting)

VOROTYNTSEV, V. T.

Drilling; knowledge gained from the work of advanced drillers in the Ural. Moskva, Ugle-tekhizdat, 1952. 70 p. Bibliotekha shaktera novatora (53-21876)

TN874.R9V59

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2

VOROTYNTSEV, V.T.

Double column pipes with a third pipe for coring. Sbor,nauch.
trud.KazGMI no.14:93-99 '56. (MIRA 10:10)
(Boring machinery)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

Vorotynsev, Yu. V.

VOROTYNTSEV, Yu.V., inzh.

Evaluation of the intensity of blooming mill operation and
utilization of driving motor capacity. Trudy UkrNTOChM 1:130-140
'56. (MIRA 10:12)

1. Institut chernoy metallurgii AN USSR.
(Rolling mills)

~~VOROTYUTSEV, Yu.~~

VOROTYUTSEV, Yu.V.; IVONIN, A.I.

Method of studying the work of bicoining mill operators. Trudy
Inst.chern.met. AN URSR 11:143-151 '57. (MIRA 10:9)
(Rolling (Metalwork)) (Time study)

VOROTYNTSEV, Yu. V.

CHEKHOV, A.P.; KLIMENKO, V.M.; MELESHKO, V.I.; CHEKHOVANOV, V.D.;
VOROTYNTSEV, Yu.V.; SHAFRAZ, I.K.

Investigation of a 1150 mm. blooming mill. Trudy Inst. Chern. met.
AN URSR 11:152-174 '57. (MLRA 10:9)
(Rolling mills)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2

УДОЛЫНТСКИЙ У.

KLIMENKO, V.M.; MALESHKO, V.I.; CHERKANOV, V.D.; PAVLOV, V.L.;
VOROTYNTSKY, Yu.V.; BORTUBOV, Ye.M.; NAZARENKO, Kh.N.; SHAFRAZ, I.K.

Increasing the output of blooming mills. Trudy Inst.chern.net.
AN URSR 11:175-131 '57. (MLRA 10:9)

(Rolling mills)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861010020-2"

Vorotyntsev, Yu. V.

137-58-2-2823

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 89 (USSR)

AUTHORS: Vorotyntsev, Yu. V., Ivonin, A. I.

TITLE: A Means of Studying the Performance of Blooming-mill Operators
(Metod issledovaniya raboty operatorov blyumingov)

PERIODICAL: Tr. In-ta chernoy metallurgii AN UkrSSR, 1957, Vol 11
pp 143-151

ABSTRACT: Results are given of a time study of the operations that occur during blooming-mill rolling. Used in the study was a specially designed timing device which recorded simultaneously on moving tape the operating time of all 7 of the blooming mill's electric motors and recorded also the time of operation in either direction. A description is given of the timing device and of a supplementary design for it which would make it possible to record on the same tape the time elapsing from the moment the metal is engaged by the rolls until the moment it emerges from the rolls. Use of the timing device afforded the possibility of comparing the performance of blooming-mill operators, of developing the best methods for doing the work, and of enabling the operators to study, learn, and adopt such methods. A similar oscillo-

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137-58-2-2823

A Means of Studying the Performance of (cont.)

graphic method was found helpful in determining the actual work load on the motor, the sequence and duration of the engagement of the various mechanisms, and the manner in which the various operations are applied ---all of which is necessary if the latent potential of blooming mills is to be exploited.

V.D.

1. Rolling mills--Operation

Card 2/2

Vorotynsev, Yu. V.

507/33-59-5-1971
AUTHORS: Chubarev, A.P., Academician of the Ac. Sc. UkrSSR,
Bogolyubov, N.P.
Malyarenko, M.S.,
Dyachenko, A.A.,
Grodar, A.P.,
Bilash, A.A.,
Glushko, V.V.,
Sokolova, T.V.,
Tsvetkov, Yu.V.

Candidate of Technical Service
Engineer

TITLE: On Maritime Analogy of Bilevel Detours
PERIODICAL: *Stahl*, 1995, Nr. 5, pp. 468-475 (MSR).
ABSTRACT: This paper presents research on the paper of B. Bakhitov - "Friction Coefficients of Reserve Friction Forces During Rolling". These are results on the paper of B. Bakhitov - "Friction Coefficients of Reserve Friction Forces During Rolling".

Ukrainian Mills (Stal', 1971), as scale by pressure in one a biomechanical conference on working of the author during a conference in original paper, the author interpreted. In the theoretical relationship the attempted to explain why the maximum angle of bite $\alpha = 20^\circ$ (where α - maximum angle of bite - study state process of rolling. The metal into rolls) is the initial moment of friction, the author point out was confirmed by practice. The paper of the Academy of Sciences of the Ukrainian SSR established the deciding influence of scale on the coefficient of friction which led to the following conclusions: 1) Scale has little

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where upon a stable rolling process is attained at an angle of bite $\alpha = 39\text{--}40^\circ$ and a ratio $a/b = 1\text{--}7$.

19

3) On rolling specimens for which no attempt was made to preserve the angle, the ratio of the radius of the ball to the width of the track - from 1.5 to values below unity. The ratio of radius of ball to radius of wheel - 1.25-1.55 (Table 4) and occasionally below unity should be explained mainly by a decrease in the friction coefficient on transfer from the initial stage of rolling to the steady state produced by the walls or other causes. With preliminary removal of scale and forced feeding of metal into the rolls, a steady state pressure can be obtained at large angles of bite. In conclusion it is stated that the corrections of Sablinov relating to the steady state conditions of rolling are incorrect.

Card 3/3

VOROTYNTSEV, Yu.V., kand.tekhn.nauk

Taking into consideration minimum overexpenditure in establishing
the grading of profiles for rolled steel standards. Standardizatsiya
22 no.5:25-29 8-0 '58. (MIRA 11:11)

1. Institut chernoy metallurgii AN USSR.
(Steel, Structural--Standards)

Vorotynsev, Yu. V.

137-1958-2-2774

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 81 (USSR)

AUTHORS: Chekmarev, A.P., Klimenko, V.M., Meleshko, V.I.,
Chekhranov, V.D., Vorotynsev, Yu.V., Shafran, I.K.

TITLE: A Study of an 1150-millimeter Blooming Mill (Issledovaniye
blyuminga 1150 mm)

PERIODICAL: Tr. In-ta chernoy metallurgii AN Ukr. SSR 1957, Vol 11,
pp 152-174

ABSTRACT: A comprehensive investigation of the performance of an 1150-millimeter blooming mill showed that the actual amount of widening that occurs in the rolling of blooms and slabs is significantly greater than the customary calculations would indicate. This error in computation of the widening led to a faulty distribution of the reduction during each of the rolling passes. Measuring the pressure of the metal on the rolls and the current in the armature of the motor revealed the availability of reserve power, which could be used to increase the reduction in a given pass in the blooming mill. The greatest specific pressure in the rolling of mild and medium-carbon steels was exhibited by killed steel MZ subjected to cold upsetting. Curves of specific power consumption for the rolling

Card 1/2

137-1958-2-2774

A Study of an 1150-millimeter Blooming Mill

operation included here, should be useful in the planning and control of power use in a blooming mill. Time-and-motion studies showed the extent of and reasons for differences in the duration of passes and of the intervening pauses among various operators and made possible recommendations for cutting down production time and down time in blooming-mill operation.

V.D.

1. Rolling mills--Operation

Card 2/2

SOV/28-58-5-6/37

AUTHOR:

Vorotyntsev, Yu.V., Candidate of Technical Sciences

TITLE:

Plotting Section Iron Gradations on the Principle of the Minimum Overexpenditure of Material in Rolled Steel Standards (Postroyeniye gradatsiy profiley po usloviyu minimal'nogo pereraskhoda v standartakh na prokatnuyu stal')

PERIODICAL:

Standartizatsiya, 1958, Nr 5, pp 25 - 29 (USSR)

ABSTRACT:

The author describes a method for calculating the gradations in section iron in rolled steel standards, proceeding from the principle of economizing on material instead of the normal procedure of calculating the gradations on the preferential numbers system. He also attempts to define the conditions which will lead to a minimum overexpenditure with gradations derived from the preferential numbers system and further gives conditions where the law of the change of gradations has no noticeable effect on

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SOV/28-58-5-6/37

Plotting Section Iron Gradations on the Principle of the Minimum Over-expenditure of Material in Rolled Steel Standards

the extent of overexpenditure. The results show that the less the number of sections in the standard (by the preferential numbers system), the greater will be the relation of overexpenditure up to a certain limit. The more sections there are in the standard, the less will be the effect of the law of gradation changes on the extent of overexpenditure. There are 2 sets of graphs.

ASSOCIATION: Institut chernoy metallurgii AN USSR (Institute of Ferrous Metallurgy, AS UkrSSR)

1. Steel--Standards
2. Steel--Classification
3. Standardization--Economic aspects

Card 2/2

Vorotyntsev, Yu. V.

137-1958-2-2790

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 84 (USSR)

AUTHORS: Klimenko, V. M., Meleshko, V. I., Chekhranov, V. D., Pavlov, V. L.,
Vorotyntsev, Yu. V., Bortunov, Ye. M., Nazarenko, Kh. N.,
Shafrazi, I. K.

TITLE: Increasing Blooming-mill Productivity (Uvelicheniye proizvoditelnosti blyuminga)

PERIODICAL: Tr. In-ta chernoy metallurgii AN UkrSSR, 1957, Vol 11, pp 175-181

ABSTRACT: A comprehensive investigation of the performance of an 1150 mm blooming mill at the Dzerzhinskiy plant revealed ways in which blooming-mill output capacity could be increased. These required the adoption of certain technical and procedural measures, namely, improving the performance of the clamping gear and of the main power unit, better regulation of the heating of the metal, etc. Once this had been done and the new high-reduction runs had been inaugurated, the rolling operation could be shortened by 4-8 passes and 1-3 turnings, with a simultaneous 150 percent increase of the reduction per smooth roll and 200 percent increase of the reduction per grooved section roll. The quality of the rolling was not impaired, industrial tests showing that the incidence of rejects had declined from 1 percent to 0.6 percent.

V.D.

Card 1/1

1. Rolling mills—Production

VOROTYNTSEV, YU. V.

VOROTYNTSEV, YU. V.: "Theoretical and experimental investigation of the laws determining the basic parameters and productivity of a reversing roll stand." Acad Sci Ukrainian SSR. Inst of Ferrous Metallurgy. Dnepropetrovsk, 1956. (Dissertation for the Degree of Candidate in Technical Sciences).

Source: Knizhnaya letopis' No. 26 1956 Moscow

Vorotynsev, Yu. V.

137-1957-12-23634

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 112 (USSR)

AUTHOR: Vorotynsev, Yu. V.

TITLE: Evaluation of the Intensity of the Operation of a Blooming Mill
and the Utilization of the Capacity of the Motor (Otsenka
intensivnosti raboty blyuminga i ispol'zovaniye moshchnosti
dvigatelya)

PERIODICAL: Tr. Nauchno-tekh. o-va chernoy metallurgii. Ukr. resp.
pravl., 1956, Vol 1, pp 130-140

ABSTRACT: The intensification of the rolling process (R) is an important
means of increasing the productivity of the rolling mills. The
index of intensity (II) may be represented by the expression
 $10 G \cdot \lg \mu E / T$, where G is the weight of the deformed metal;
 μE is the total amount of drawing; T is the time required for
the rolling of the ingot. As for its physical significance, the II
is a value which is proportional to the rate of the volumetric
displacement. The magnitude of the II was assumed in order to
evaluate the intensity of operation of five blooming-mills (BM)
driven by a 7000-hp powerplant and rolling steel 3 (BM Nr 2 and
3 of the MMK, BM 1100 of the KMK, BM of the "Krasnyy Oktyabr")

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137-1957-12-23634

Evaluation of the Intensity of the Operation of a Bloom Mill. (cont.)

plant, and the BM 1150 of the Dzerzhinsky plant). In order to time the work of the operators exactly, a chronograph constructed by the rolling shop of the IChM (Institute of Ferrous Metallurgy) of the USSR Academy of Sciences was employed. A reduction in the number of passes leads to increased intensity and results in a higher II. Since it is convenient for the operators to eject the rolled material onto the conveyor rollers which are rotating toward the mill (this produces a better rhythm of operations), the ejection must occur at definite rpm, so that the piece ejected from the roller returns to them at the exact instant when their adjustment has been accomplished. The ejection at high rpm results in an increased length of the intervals. Decreased rpm at the time of the ejection results in slower passes with a corresponding loss of time, which can be eliminated only by returning to high rolling velocities, provided the coefficient of friction of the metal against the conveyor rollers is greatly increased (by roughing up the surface). In this instance, the total rolling time of an ingot will be reduced; this will lead to a greater loading of the motor and a better utilization of the power drive in sections where the available loading margin is not sufficient to permit a reduction in the number of passes. When the motor is loaded to

Card 2/3

137-1957-12-23634

Evaluation of the Intensity of the Operation of a Blooming Mill. (cont.)

its limit, all other conditions being equal, the revolutions at the time of ejection and the average rolling velocities may not be increased since this would result in overloading. In the event of slight overloading of the motor the best solution is to decrease the rpm during the ejection.

B. Ye.

1. Blooming mills-Operation
2. Motors-Capacity operation-Applications

Card 3/3

CHEKMAREV, A.P.; VOROTYNTSEV, Yu.V.

Some results of timing by chronograph the work of blooming mill
operators. Trudy Inst.chern.met.AN URSR no.10:138-152 '56.

(MLRA 9:11)

(Chronograph) (Rolling (Metalwork))